

FIG. 1

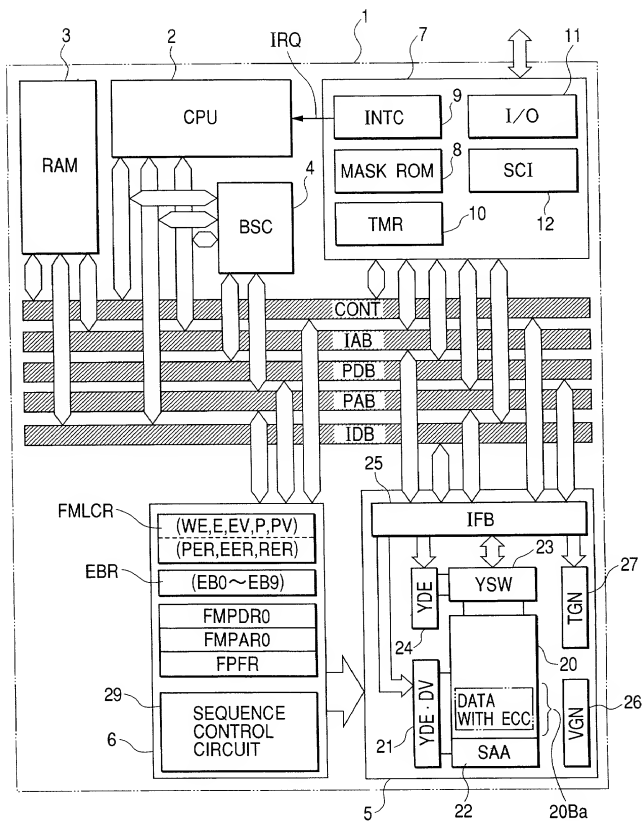


FIG. 2

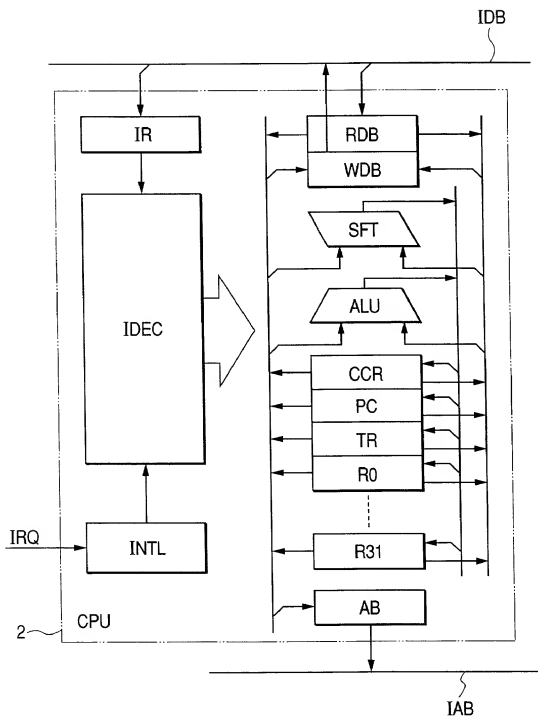


FIG. 3(A)

FIG. 3(B)

FIG. 3(C)

FIG. 3(D)

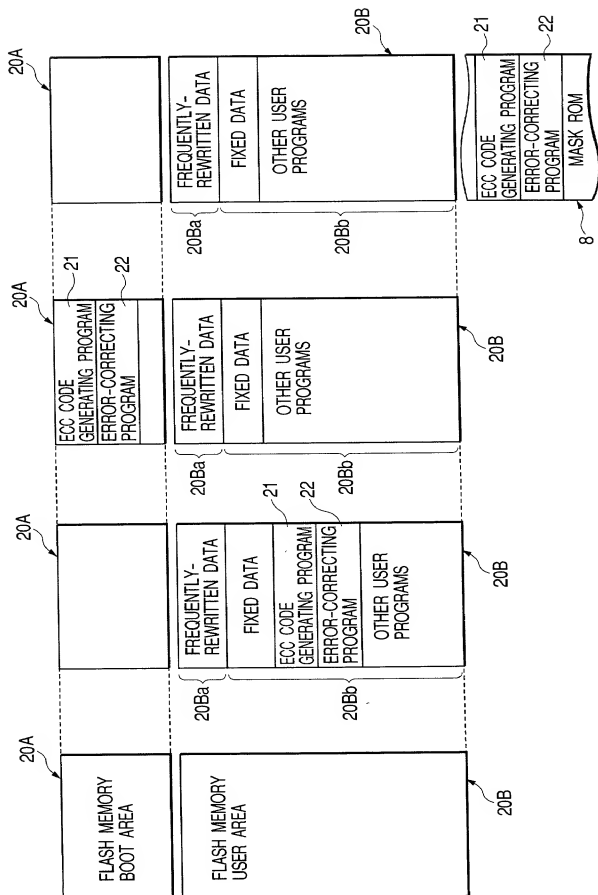


FIG. 4

NUMBER OF USER DATA BITS	NUMBER OF ECC CODE BITS	OVERHEAD	CORRECTING CAPABILITY
8 BITS	4 BITS	50%	1 BIT OF 8 BITS
16 BITS	5 BITS	31%	1 BIT OF 16 BITS
32 BITS	6 BITS	19%	1 BIT OF 32 BITS
64 BITS	7 BITS	11%	1 BIT OF 64 BITS
128 BITS	8 BITS	6%	1 BIT OF 128 BITS
256 BITS	9 BITS	4%	1 BIT OF 256 BITS

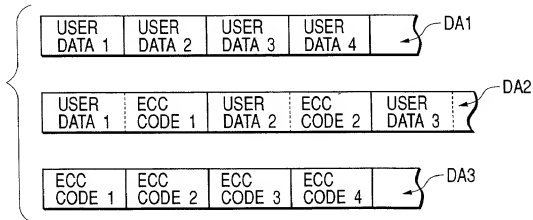
FIG. 5

FIG. 6(A)

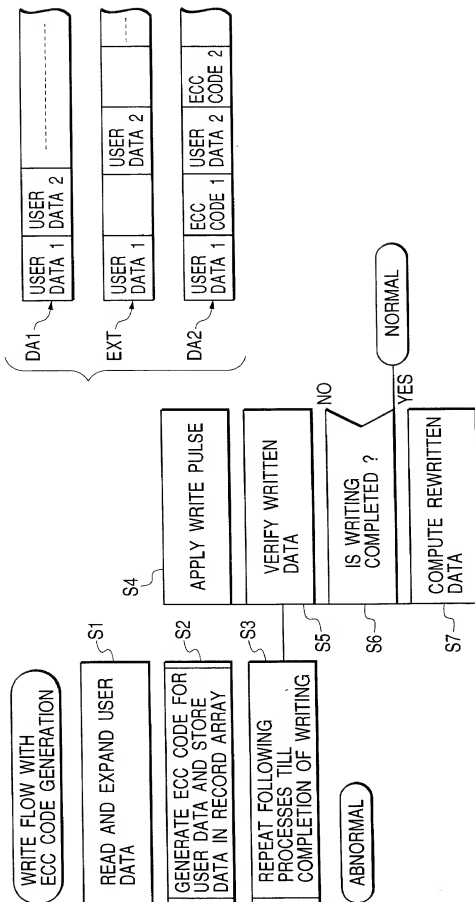


FIG. 7(A)

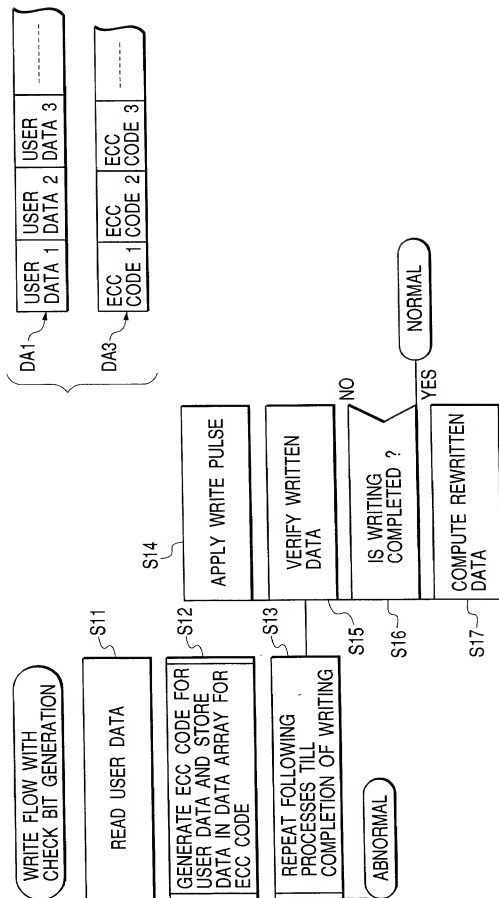


FIG. 8

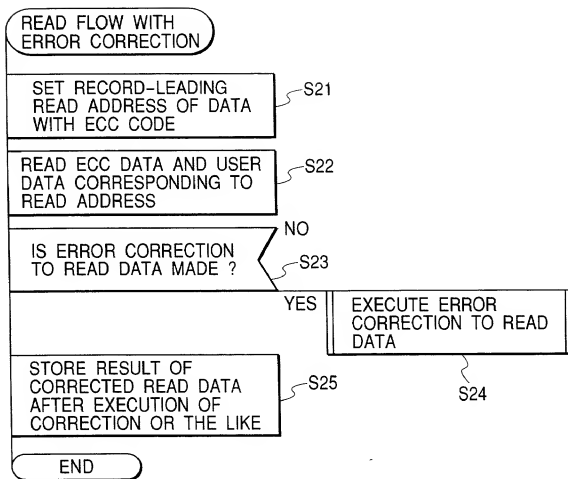


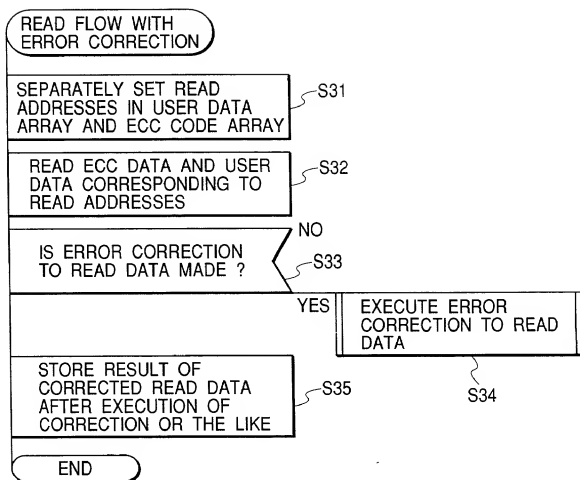
FIG. 9

FIG. 11

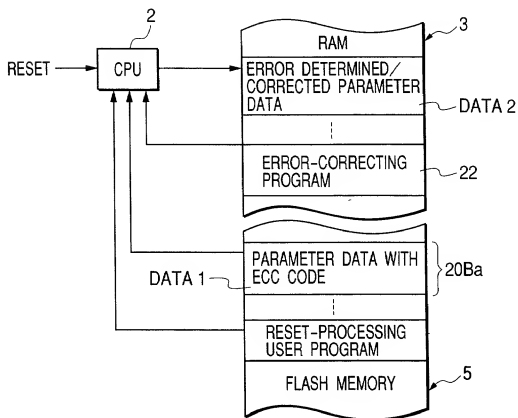
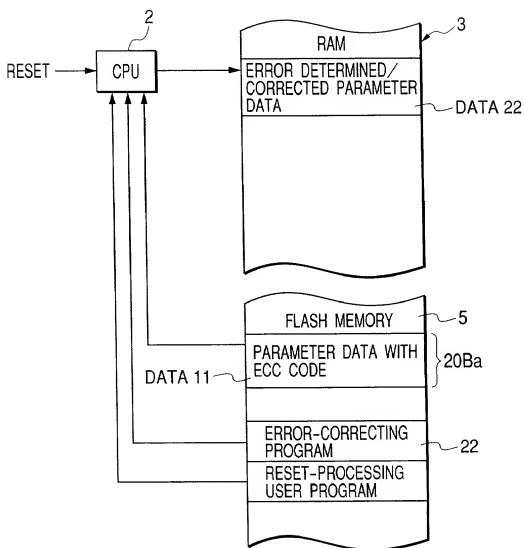


FIG. 12



102280 62988660

FIG. 13

(GENERATION MATRIX)

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
6	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
7	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1
9	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0
10	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0
11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0
12	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1
13	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1
14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1

(CHECK MATRIX)

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0
3	1	1	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	1	0	0	0
4	0	0	1	1	0	1	1	0	0	1	1	0	1	1	1	0	1	0	0	0	1	0
5	1	0	1	0	1	1	0	1	0	1	0	1	1	0	1	1	0	1	1	0	0	1

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FIG. 14

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
m15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
m14	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
m13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
m12	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
m11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
m10	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
m9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	7
m8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	8
m7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	9
m6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	10
m5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	11
m4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	12
m3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	13
m2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	14
m1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	15
m0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	16

M

41

FIG. 15

		1	2	3	4	5	
1	1	1	0	1	0	1	1
0	0	1	0	1	0	0	2
0	0	1	0	0	1	1	3
0	0	1	0	0	1	0	4
0	0	1	0	0	0	1	5
0	0	0	1	1	1	1	6
0	0	0	1	1	1	0	7
0	0	0	1	1	0	1	8
0	0	0	1	1	0	0	9
1	0	0	1	0	1	1	10
0	0	0	1	0	1	0	11
0	0	0	1	0	0	1	12
0	0	0	0	1	1	1	13
0	0	0	0	1	1	0	14
0	0	0	0	1	0	1	15
1	0	0	0	0	1	1	16

M 41A

FIG. 16

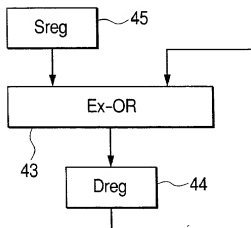


FIG. 17

FIRST ROW	1	1	0	1	0	1
TENTH ROW	1	0	1	0	1	1
SIXTEENTH ROW	1	0	0	0	1	1
Ex-OR RESULT		1	1	1	0	1

P

FIG. 18

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0
3	1	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0	1	0	0
4	0	0	1	1	0	1	1	0	0	1	1	0	1	1	0	1	0	0	0	1	0
5	1	0	1	0	1	1	0	1	0	1	0	1	1	0	1	1	0	0	0	0	1
	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	0	1

FIG. 19

1	10	16	17	18	19	20	RESULT
1	0	0	1	0	0	0	0
0	1	0	0	1	0	0	0
1	0	0	0	0	1	0	0
0	1	1	0	0	0	0	0
1	1	1	1	1	1	0	0

FIG. 22

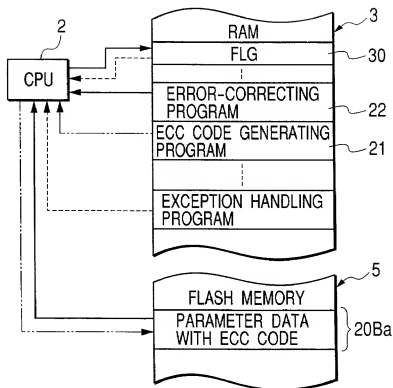


FIG. 23

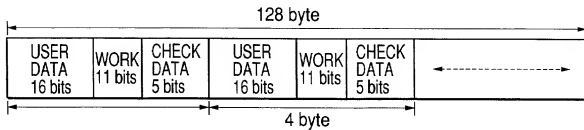


FIG. 24

CONFIGURATION OF ECC DATA BLOCK

BIT	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
FUNCTION NAME	D15	D14	D13	D12	D11	D10	D09	D08	D07	D06	D05	D04	D03	D02	D01	D00
DEFAULT VALUE	USER-WRITTEN DATA															
REMARKS	USER-WRITTEN DATA (DATA THAT USER DESIRES TO ERROR-CORRECT)															

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
-	-	-	-	-	-	-	-	-	-	-	P04	P03	P02	P01	P00
USER TRANSFER ALL "1"															
UNUSED										CODING CHECK BIT					

FIG. 25

RETRIEVAL ADDRESS (Z)	DATA FOR GENERATION (Y)	FUNCTION NAME
X	b'0000_0011	D00
X+1	b'0000_0101	D01
X+2	b'0000_0110	D02
X+3	b'0000_0111	D03
X+4	b'0000_1001	D04
X+5	b'0000_1010	D05
X+6	b'0000_1011	D06
X+7	b'0000_1100	D07
X+8	b'0000_1101	D08
X+9	b'0000_1110	D09
X+A	b'0000_1111	D10
X+B	b'0001_0001	D11
X+C	b'0001_0010	D12
X+D	b'0001_0011	D13
X+E	b'0001_0100	D14
X+F	b'0001_0101	D15
X+10	b'0000_0001	P00
X+11	b'0000_0010	P01
X+12	b'0000_0100	P02
X+13	b'0000_1000	P03
X+14	b'0001_0000	P04

ECC TABLE (ECCTLB)

FIG. 26

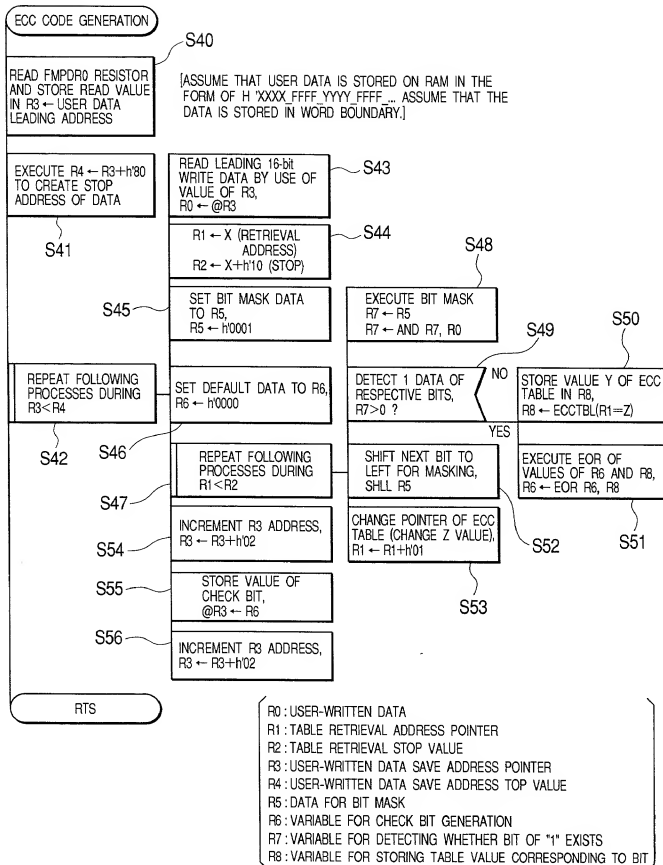


FIG. 27

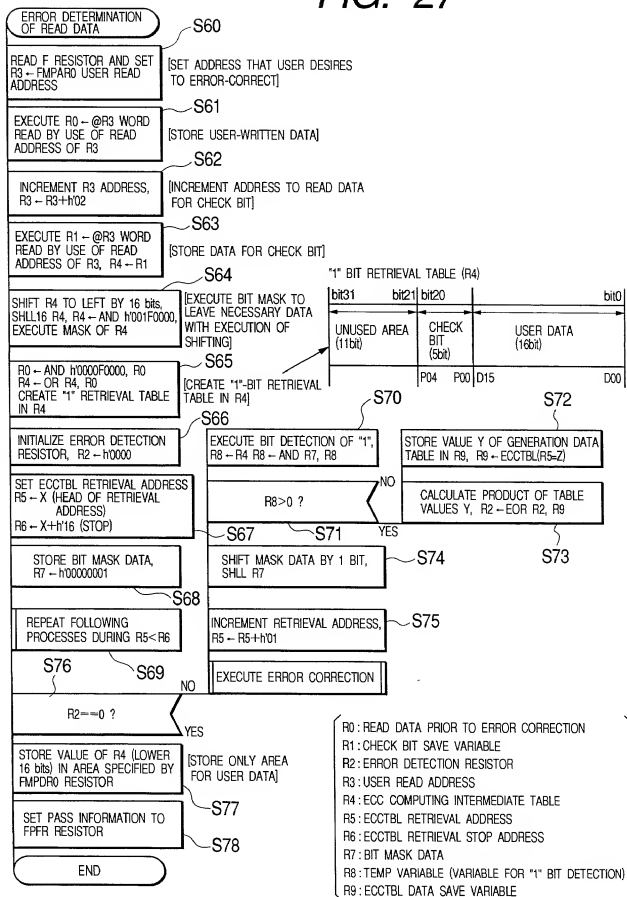


FIG. 28

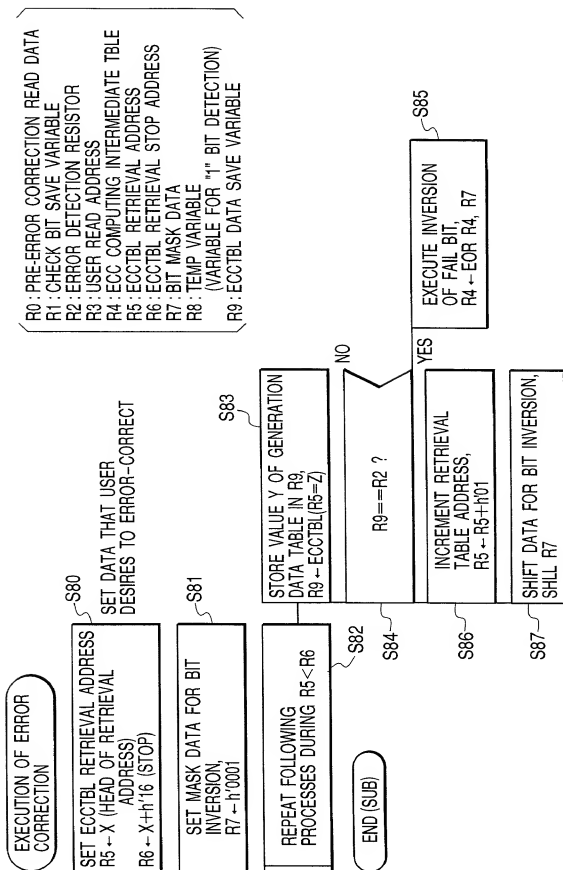


FIG. 29

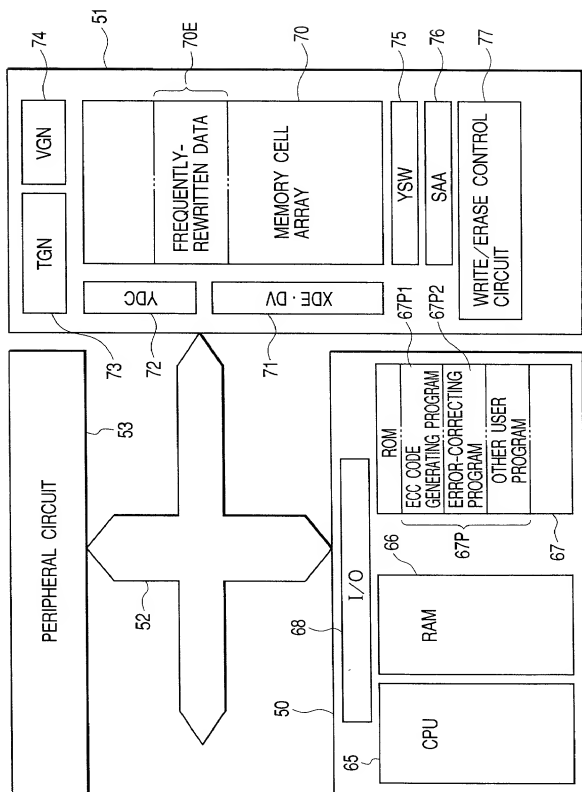


FIG. 30

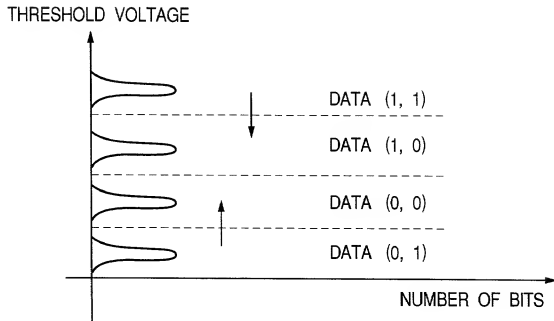


FIG. 31

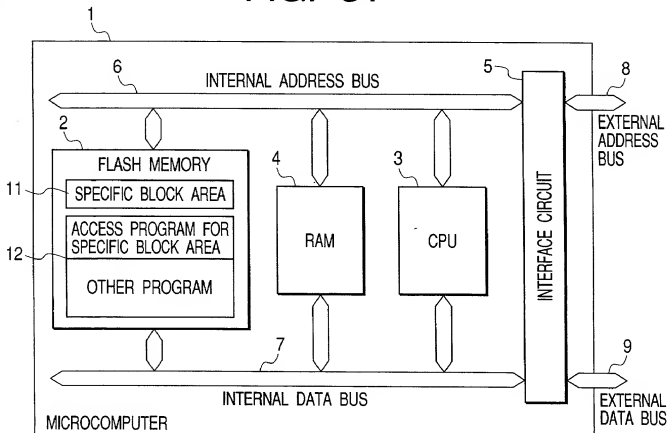


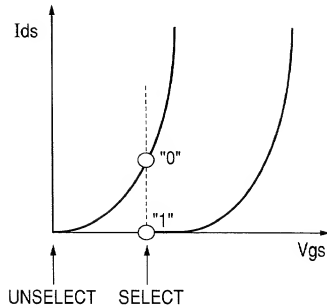
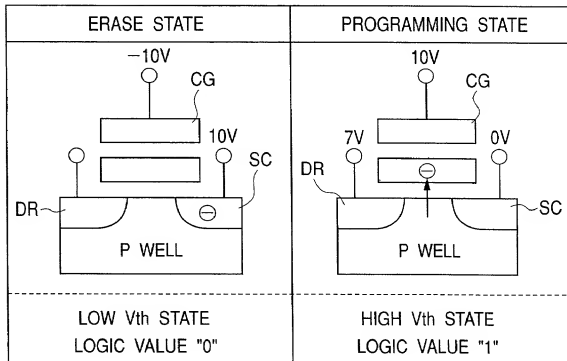
FIG. 32**FIG. 33**

FIG. 34

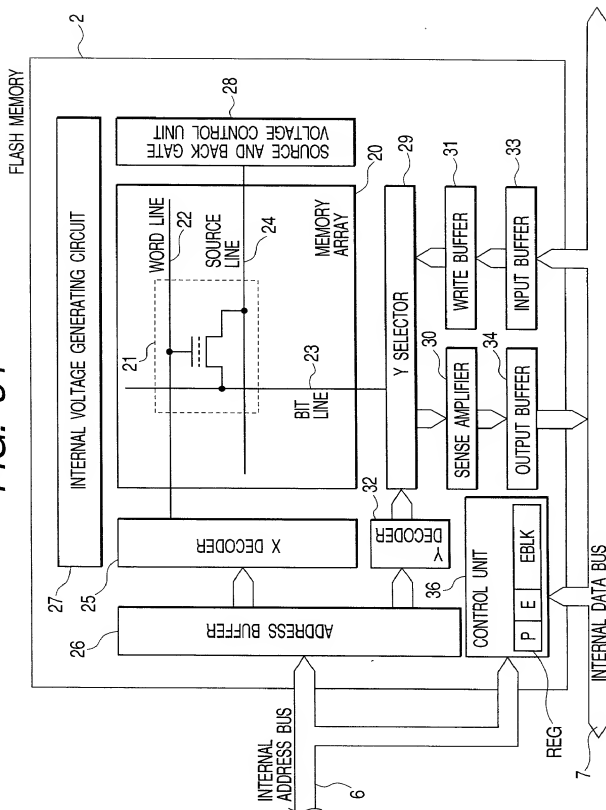


FIG. 35

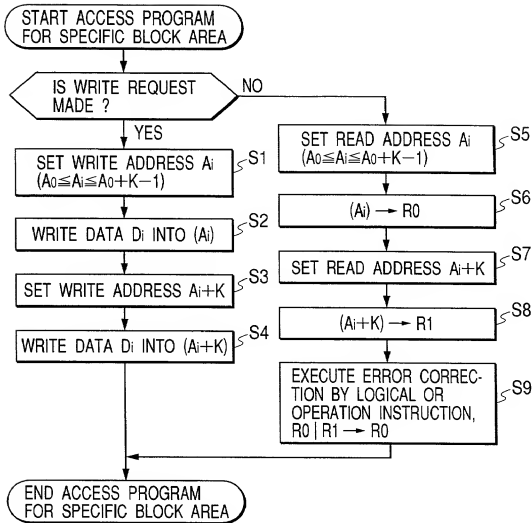


FIG. 36

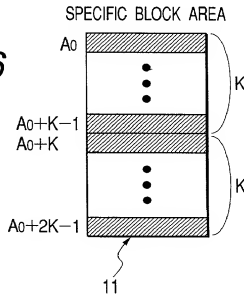


FIG. 37

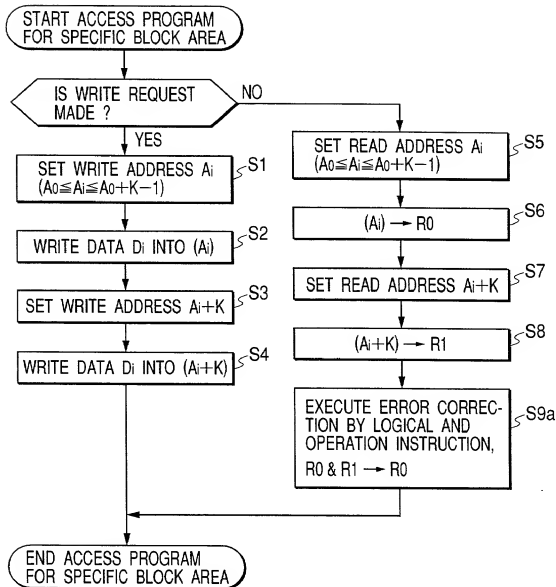


FIG. 38

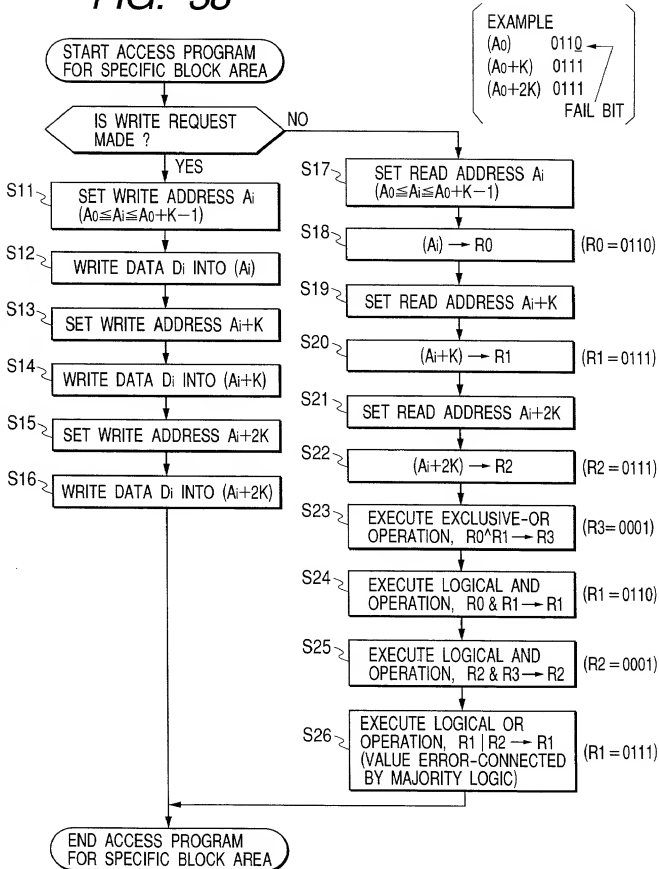


FIG. 39

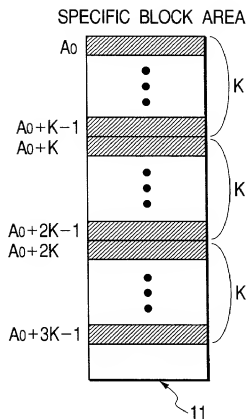


FIG. 40

